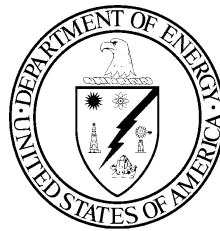


Tank Waste Remediation System

Chapter 4



Characterization

Tank Waste Characterization - A Historical Perspective



- 1989 - 1997
 - The Tri-Party Agreement previously required 2 cores from every tank. This made sense then because:
 - DOE had not yet agreed to full retrieval of single-shell tank waste - this gave necessary RCRA information to make this decision
 - Very little was known about tank contents; a sophisticated characterization strategy was not possible
 - However, this was costly and didn't always directly solve the existing problems
- Current process collects data needs from data users (e.g., retrieval, saltwell pumping, organic safety issue resolution, privatized contractors) and samples/analyzes tanks which will provide the necessary data

Current Tank Sampling Capabilities

- Rotary Mode Core Sampling
 - Used to obtain solid waste samples
- Push Mode Core Sampling
 - Used to sample only supernatant liquid and soft sludge
- Retained Gas Sampling
 - Used to sample the flammable and noxious vapors and gases present in the tank waste
- Grab Sampling
 - Used to sample liquid or soft slurry
- Auger Sampling
 - Used to sample the first 8 inches of solids on the waste surface
- Vapor Sampling
 - Used to sample gases in tank vapor space



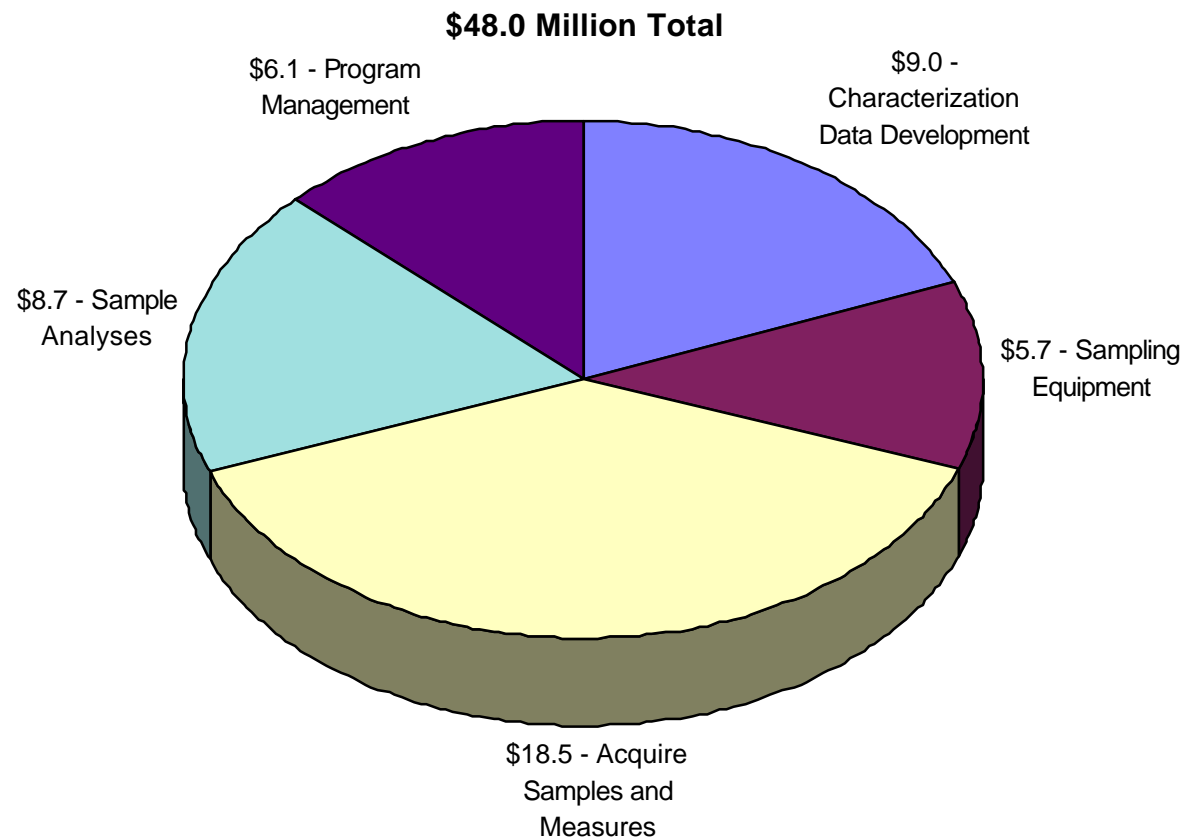
Current Status of Tank Characterization

- 1,227 total core segments to date
- 131 out of 177 tanks have been sampled
- 112 tanks characterized have regulator concurrence
- All 11 treatment feed tanks have been sampled and met waste feed specifications
 - Seven out of 11 feed tanks for private contractors have been *re-sampled* and confirmed adequacy of feed specifications
 - Remaining four tanks to be re-sampled

Characterization Results

- Critical to closure of tank safety issues
- Major contributor to issuance of first ever comprehensive tank farms safety documentation
 - Basis for Interim Operation issued and implemented in FY 1997
 - Final Safety Analysis Report to be implemented in FY 1999
- Provided essential information to define tank waste feed for immobilization

FY 1998 Characterization Budget



Characterization - Meeting Future Treatment Plant(s) Needs



- Private contractors are requiring larger volumes of real waste to operate pilot scale facilities
 - Current sampling techniques are not “quantity oriented”
 - TWRS needs to expand the ability to provide larger quantities of real waste to the private vendors

Characterization - Points of Contact

- Carol L. Sohn - Director
Safety and Characterization Division
– (509) 376-8523
- James A. Poppiti - Tank Characterization Manager
Safety and Characterization Division
– (509) 376-4550